



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/654,422

09/04/2003

Niraj Vasishtha

113631

7624

32047 7590 01/25/2008

GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC  
55 SOUTH COMMERICAL STREET  
MANCHESTER, NH 03101

EXAMINER

HAIDER, SAIRA BANO

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/654,422

Applicant(s)

VASISHTHA ET AL.

Examiner

Saira Haider

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7,9,10,12-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,9,10,12-17,19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

### *Claim Rejections - 35 USC § 103*

2. Claims 7, 9, 10, 12-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. (US 5,176,903).

3. Goldberg discloses a composition comprising microcapsules, wherein the microcapsules encapsulate a core material comprised of a fragrance oil and an ester (core component) (abstract, col. 2, lines 35-46). The coating material (i.e. shell) of the microcapsule comprises 10-30% modified food starch (structuring agent) and 60-90% of polysaccharides (polymer material), in addition to small amounts of other constituents, such as flow agents and system stabilizers. Wherein the microcapsule containing the fragrance/ester is made by spray drying the emulsion and drying the droplets in drying (col. 3, line 66 to col. 4, line 20). Goldberg exemplifies that the final formed microcapsules are in the form of a powder (Example 1: col. 7, line 13-15). Goldberg discloses that spray drying process comprises forming an aqueous solution of the coating composition and an emulsion of the core material, wherein the emulsion is broken up into droplets of the desired size and dried (col. 3, lines 34-43), thus it is clear that the structuring agent (a component of the coating) is dispersed within the shell upon completion of spray drying process.

4. Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, since the prior art teaches the identical chemical structures for the core, structuring agent and the polymer material, the properties (pendant ionic groups, formation of an ionic bridge, and decrease in oxygen and water permeability) applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The burden shifts to the applicant to show an unobvious difference. Note, that because the reference does not expressly teach or address the properties of the claimed invention, does not mean that the properties are not inherently disclosed. Teaching the same compound(s) inherently discloses the corresponding properties. The references cannot possibly teach or address all of the properties, but implicitly all of the properties are present.

5. The Goldberg reference fails to specify the average particle size of the structuring agent as falling in the claimed range of about 0.1 to about 1 micron. Goldberg discloses that the aqueous coating formulation is emulsified, thus, the food starch, the polysaccharides, and water are present in an emulsion. It is clear that the food starch will form droplets in the mixture, wherein the size of the droplets is a function of the amount of homogenizing. It is the examiner's position that the droplet size is a result effective variable because changing it will clearly affect the type of product obtained. Wherein changes in the droplet size will alter the size of the final microcapsule produced and the amount of ionic bridges formed between the structuring agent and the polymer material thus varying the strength of the coating (shell). See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. In view of this, it would have been obvious to one of ordinary skill in the art to modify the mixing rate to produce droplets of within the claimed size range in order to produce desired end results.

7. In reference to claims 17 and 19, which specifies that the structuring agent forms an inner shell around the core and the polymer material forms an exterior shell around the inner shell. It would have been obvious to one of ordinary skill in the art at the time of the invention to form a dual layered microcapsule, wherein both outer layers comprise the structuring agent and the polymer material, however, each layer comprises the components in different amounts. The motivation do to so is provided by the fact that a thicker coating will better protect the core material and decrease chances of undesired core release. Further, a variation in the amounts of components will further increase the strength of the core material. Either the inner layer or the outer layer can comprise a greater amount of the structuring agent and thus can be considered the structuring agent layer. The corresponding is true for the polymer material. It is the examiner's position that selection of which layer comprises a greater amount of either material is rendered result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. In view of this, it would have been obvious to one of ordinary skill in the art to utilize a greater amount of structuring agent in the inner layer so as to produce desired end results. Wherein it is clear that if the inner layer comprises a greater amount of structuring agent and the outer layer comprises a smaller amount of structuring agent, the gradient of claim 19 is obtained.

9. It is noted that the inner layer can be considered the structuring agent layer since it comprises the structuring agent, and the outer layer can be considered the polymer material layer since it comprises the polymer material.

***Response to Arguments***

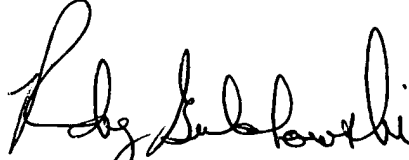
10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider  
Examiner  
Art Unit 1796

  
RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700